

it can be seen that the areas of required radio coverage are large indeed. SCG contends that appreciable levels of Effective Radiated Power have been, are, and will be required to provide its required radio coverage.

47. SCG possesses two elements which facilitate meeting its needs for large area radio coverage: a mobile fleet sufficiently large to justify "exclusive use" channels, and access to communications sites located atop high mountains, whose elevations can provide extended operating ranges. Moreover, SCG argues, many other entities in the western United States who are eligible under the proposed "Non-Commercial" and "Public Safety" Rules categories also possess these two elements.

48. For these entities, SCG contends that the proposed antenna height and power limitations⁴³ are inappropriate. Moreover, the premise under which the tables have been constructed, namely co-channel reuse at 50 miles⁴⁴, is not realistic in a California context. For example, the radio horizon from a communications site atop a 6,000 foot mountain, assuming a 4/3 earth radius propagation model, is 109.5 miles, while the same figure for a 10,000 foot elevation site is 141 miles. SCG, as well as many other California and western U.S. licensees, operates numerous base stations from mountain top sites with elevations within these limits.

49. The Commission, in support of its 50 mile co-channel separation proposal, contends⁴⁵ that

"Systems requiring greater geographic coverage could build additional sites."

⁴³ Proposed Rule #88.429 and Tables therein

⁴⁴ Docket at #20

⁴⁵ Docket at Footnote 39

SCG cannot endorse this view. Additional sites to "fill in" geographical coverage multiply the amount of capital required to build or modernize a corporate communications system. These additional sites also increase system complexity, control, and maintenance requirements. Furthermore, the additional sites would, in the Commission's view, be located at low elevation sites to constrain the coverage areas which they produce⁴⁶. However, SCG's private digital microwave network extends through many of the high mountain communications sites at which its PLMRS base stations are co-located. It is the co-siting of the SCG microwave system with its PLMRS communications stations which will permit modernization of the mobile dispatch system into a voice/data network capable of seamless operation across its entire service territory. Low elevation sites would necessarily not be connected to the microwave system, again because of capital considerations. Thus the Commission's proposal is unattractive in the context of private fleet operations in California.

50. SCG contends that Rules exemptions governing co-channel separations, power levels, and antenna heights must be available for California and western United States eligibles, including Non-Commercial and Public Safety licensees of "exclusive use" channels who have need to operate "wide area" systems. For these system operators, the provisions of Table C-3, #88.429, are highly restrictive and wholly inadequate. Base stations operating at Heights Above Average Terrain ("HAAT") above 600 feet⁴⁷ with Effective Radiated Powers of five watts will

⁴⁶ In the limit of the concept, a "cellular" PLMRS system would result.

⁴⁷ HAATs above 600 feet are characteristic of the majority of SCG's present 153 MHz base stations.

not provide adequate coverage of SCG's regional service territories⁴⁸. Such wide area private fleet systems, including SCG's, require individual detailed power/height authorizations, based upon their engineering designs. Proposed Rule #88.277 provides a basis for relief in this area, but SCG supports strengthening and clarifying its provisions.

51. For protection margins for all co-channel systems operating below 800 MHz, SCG strongly prefers the 40dBu / 22dBu criterion proposed in PR Docket No. 93-60, rather than the 37dBu / 27dBu margin proposed in the instant Docket. Our reasoning has been outlined in Comments filed in response to RM-8028; in summary, SCG believes that a 10 dB margin between wanted and unwanted co-channel signals is insufficient for modern mobile communications systems which utilize digital data, either for control of mobile stations⁴⁹ or as the central communications content. SCG strongly recommends retaining the 18 dB margin.

VIII. THE PROPOSED NOMENCLATURE FOR NEW LICENSEE CATEGORIES SHOULD BE REVISED

52. SCG takes exception to the terminology used to categorize those channels reserved for eligibles who propose to license and operate private land mobile radio systems for their own internal use⁵⁰: "Non-Commercial." The nomenclature seems, to SCG, to be singularly inappropriate; the incorrect inference can easily be made that the term connotes channels which are reserved exclusively for non-profit, charitable, and/or philanthropic organizations.

⁴⁸ Even taking into account the increased signal-to-noise ratio accruing from a smaller bandwidth transmission channel (5 kHz vs. 15 kHz)

⁴⁹ i.e., "trunking"

⁵⁰ And, by extension, the radio systems which are licensed to operate on the channels so

53. While the point which SCG raises may be construed to be obscure, our experience in operating private land mobile radio systems for a major corporation provides justification for suggesting alternative nomenclature for the various proposed classes of licenses.

54. It is often necessary for matters pertaining to land mobile licensing and operation to be reviewed, understood, and approved by managers who are themselves not intimately conversant with telecommunications technology and regulation. For these individuals, a designation of "Non-Commercial" may lead to wholly incorrect inferences about matters under review⁵¹.

55. Since this is a matter solely of terminology, without associated economic potential, and since the nomenclature has been proposed for the first time in the instant docket, a strong argument can be advanced for selecting more appropriate terminology for initial incorporation into the proposed Part 88 Rules. SCG therefore suggests replacing the term "Non-Commercial" with the more descriptive and more accurate term "Private Fleet."

⁵¹ Indeed, even communications professionals may be misled upon first reading of the terminology.

CONCLUSION

SCG, both as a major public utility and a PLMRS licensee with a very large private fleet of vehicles, has presented its views concerning PR Docket No. 92-235. In summary, SCG:

- o Agrees with the basic premises and goals of the instant Docket
- o Strongly urges the creation of the maximum number of duplex pair channels on the 150-162 MHz frequency band
- o Requests that the Commission take a leadership position in ensuring that "narrowband" communications technology becomes available which meets both the technical requirements of the proposed Part 88 Rules and the operational needs of PLMRS licensees
- o Urges a liberalization of eligibility requirements for "Innovative Shared Use" licenses to include consortia of public utilities
- o Requests that contiguous frequency blocks and Multiple Access emissions be made available to Exclusive Use licensees in the Public Safety and Non-Commercial categories
- o Recommends that the Commission institute codified channel sharing of the refarmed spectrum in areas proximate to the US-Canada and US-Mexico international border areas
- o Strongly requests that the Commission revisit the proposed technical and operational standards proposed in Part 88 in view of the needs of Non-Commercial and Public Safety eligibles in the western United States for wide area coverage systems

- o Recommends that the proposed license category "Non-Commercial " be renamed "Private Fleet," to avoid possible mis-interpretation of eligibility requirements.

SCG chooses not to participate in areas of the instant Docket which relate to types of licenses, privileges, and activities in which it is not actively involved. SCG, however, prays that the Commission will accept its Comments as representative of the public utility industry and of operators of large wide-area private fleet communications systems, and will act favorably on the proposals and recommendations contained herein.

Respectfully submitted,

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